

Notice of Allowability

Application No.

09/901,014

Examiner

Nelson Yang

Applicant(s)

CHU, WEI-SING

Art Unit

1641

- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the response filed November 5, 2009.
2. ☒ The allowed claim(s) is/are 70,72-75,77-79,92-96 and 98-112.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
Identifying Indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

/Nelson Yang/
Primary Examiner, Art Unit 1641

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Jeffrey Ihnen on December 15, 2009.

The application has been amended as follows:

Please amend p. 9, lines 27-29 of the specification as follows:

Figure 10A and 10B shows pictures of tissue samples which have been H&E stained using either the routine fixation and processing method (no ultrasound) or the new technique (with ultrasound).

Please amend p. 10, lines 1-3 of the specification as follows:

Figure 11A and 11B shows pictures of tissue samples which have under gone CD5 staining using the routine fixation and processing method (no ultrasound) or the new technique (with ultrasound).

Please amend p. 10, lines 4-6 of the specification as follows:

Figure 12A and 12B shows pictures of tissue samples which have undergone in situ hybridization with poly-A mRNA using either the routine fixation and processing method (no ultrasound) or the new technique (with ultrasound).

Please amend claim 70, 98, as follows:

70. A system for fixing tissue samples, comprising:

a reaction chamber including a solution selected from the group consisting of a fixative, alcohol, xylene and paraffin for immersing a tissue sample therein;

an ultrasound transducer, immersed in said solution, to irradiate the tissue sample, immersed in said solution, with ultrasound energy, wherein said ultrasound transducer is within 2 inches of said tissue sample;

an ultrasound generator, coupled to the ultrasound transducer, to generate the ultrasound energy;

at least one sensor, immersed in the solution, to monitor at least one of a physical parameter of the tissue sample and the ultrasound energy selected from the group consisting of temperature, size, tissue type, tissue density, ultrasound frequency, and ultrasound intensity; and

a central processing unit, coupled to the ultrasound generator and the sensor, programmed to control the ultrasound generator [by adjusting] and to adjust at least one of a frequency between 100 kHz and 50 MHz, and an intensity between 0.01 and 200 W/cm² of the ultrasound energy that is applied to the tissue sample in response to a signal received from the sensor, in order to fix the tissue sample in the solution with no or minimal damage.

98. A system for fixing tissue samples, comprising:

a reaction chamber including a solution selected from the group consisting of a fixing agent, a dehydrating agent, a clearing agent and paraffin for immersing a tissue sample therein;

an ultrasound transducer, immersed in said solution, to irradiate the tissue sample, immersed in said solution, with ultrasound energy of at least 100 KHz and a power in the range of 0.01-200 W/cm² wherein said ultrasound transducer is within 2 inches of said tissue sample;

an ultrasound generator, coupled to the ultrasound transducer, to generate the ultrasound energy;

at least one sensor, immersed in the solution, to monitor at least one of a physical parameter of the tissue sample and the ultrasound energy selected from the group consisting of temperature, size, tissue type, tissue density, ultrasound frequency, and ultrasound intensity; and

a central processing unit, coupled to the ultrasound generator and the sensor, programmed to control the ultrasound generator [by adjusting] and to adjust at least one of a frequency between 100 kHz and 50 MHz and an intensity between 0.01 and 200 W/cm² of the ultrasound energy in response to a signal received from the sensor, in order to fix the tissue sample in the solution with no or minimal damage.

Please cancel claims 72, 74, 100, and 102.

Please rejoin withdrawn claims 107, 110, 108, and 111.

Please renumber claims 70, 72-75, 77-79, 92-96, 98-112 as 1-28 respectively.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nelson Yang whose telephone number is (571)272-0826. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Shibuya can be reached on (571)272-0806. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Nelson Yang/
Primary Examiner, Art Unit 1641